

A method and apparatus for ceramizing the starting glass of glass-ceramics

Abstract

The invention relates to a method for ceramizing starting glass of glass-ceramics into glass-ceramics, comprising at least the following steps:

- 1.1 the starting glass is heated from an initial temperature  $T_1$  to a temperature  $T_2$  which is disposed above the glass transformation temperature  $T_G$  at which crystallization nuclei are precipitated;
- 1.2 the glass is held at the temperature  $T_2$  for a period  $t_2$  for the precipitation of crystallization nuclei;
- 1.3 the glass is further heated to a temperature  $T_3$  at which a crystal phase grows on the nuclei formed following step 1.1 and 1.2;
- 1.4 the glass is held for a period  $t_3$  at a temperature  $T_3$  or heated during this period to a higher temperature  $T_4$  until the predetermined properties of the glass-ceramics have been reached;
- 1.5 the control of the temperature curve is performed with the help of a control loop comprising at least one temperature sensor for sensing the temperature and a heating unit as an actuator.

The invention is characterized in that

- 1.6 the heating unit comprises IR radiators for heating the glass to be relaxed with a thermal dead time of less than 10 secs., especially  $< 5$  secs.